

CLIMATE JUSTICE AND SUSTAINABLE DEVELOPMENT: A COMPARATIVE STUDY OF PAKISTAN AND THE EUROPEAN UNION

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Abstract

Climate justice concerns inequities in the burden of climate change and the ability to respond. This article examines this relationship by comparing the European Union and Pakistan. Pakistan's contribution to CO2 emissions is relatively small, but it is highly vulnerable to flooding, heat, drought, glacial changes, water stress, food insecurity, and development disruptions. The European Union has a greater historical responsibility, financial and technological power, regulatory authority, and influence in international climate governance. This comparison, then, illustrates the link between sustainable development and differentiated accountability. This article assesses the principles of climate justice; climate vulnerabilities and governance issues in Pakistan; EU climate policy and international obligations; and the interface between the two jurisdictions. It argues that both sides need to be held accountable, but in different ways. Pakistan needs to strengthen implementation, coordination, transparency, public engagement, and protection. The EU needs to make more ambitious emission cuts, offer reliable climate finance, enable just technology transfer, consider the external effects of its consumption and trade patterns, and contribute sufficiently to loss and damage support mechanisms. A fair partnership needs to include quantifiable contributions, available grants, durable infrastructure, institutional capacity building, and monitoring capacity. Cooperation improves when it advances low-carbon development without shifting the cost burden to the least responsible countries and communities. This distinction matters. The comparison reveals inequity of power. Institutional capacity and transparency are prerequisites for effective cooperation.

1. INTRODUCTION

Climate change is a shared problem, and this common threat is spoken in a common language, but that common language can mask shared

responsibility. No single country made the same contribution to GHG concentrations, and no one country has the same assets to protect itself or

control the rules that affect the world (Eriksen et al., 2021). A fair comparison must consider more than national targets. It has to reflect historical emissions, economic capacity, exposure, institutional strength, development needs, and the distribution of costs in each society. Pakistan and the European Union are poles apart in this system. Pakistan is a lower-middle-income developing country where several interacting climate hazards affect the population, settlements, agriculture, water resources, mountains, and coastlines. Adaptation is constrained by limited fiscal space, debt pressures, informal employment, inequitable services, and poor governance (Amorim-Maia et al., 2022).

Climate-related disasters can reverse development by damaging infrastructure, reducing agricultural income, disrupting education, increasing disease, and diverting public funds from long-term investments. The European Union (EU) is a rich, technologically advanced, well-established governmental and policy framework that has significant regulatory authority (Deivanayagam et al., 2023). Its member countries have enjoyed long industrialization periods, with fossil fuel support. The Union has established an ambitious climate policy including emissions targets, carbon pricing, renewable energy, efficiency, industrial policy, and its intention to become climate neutral. It also influences global markets by setting product standards, through trade measures, development finance, and leadership in diplomacy. The comparison must not be made too easy in the form of a weak Pakistan and a cohesive and successful European Union (Rentschler & Leonova, 2023).

Pakistan is primarily responsible for effectively managing its land, water, energy, cities, agriculture, and disaster preparedness at the national level. Hazards can become preventable catastrophes because of policy failure, corruption, poor coordination, and inequalities in access to public services. The EU is also home to weak areas, energy poverty, industrial dependency, political discord, and transition inequalities (Upham et al., 2022). When its consumption is based on imported carbon, its trade policies impose costs on poorer exporters, or the pledged international financial support is insufficient, its climate leadership is diminished. This article proposes a modified notion of

accountability that is shared but differentiated. Pakistan should be assessed according to its responsibility, which depends upon its capacity, policy, and responsibility to safeguard its people. The European Union should be compared with the other factors it has contributed to the world and commands. The connecting standard is sustainable development, as climate actions need to enhance energy access, employment, health, resilience, equality, and long-term economic opportunity (Coggins et al., 2021). The intent of a comparison is to make two disparate systems comparable; to put them beside one another. It's about finding ways to level the playing field across different parts of the job and measure results. Successful change in practice around historical contribution and current capacity demands clear legal responsibilities, sufficient funding, public engagement, and an open assessment of outcomes. Pakistan's weaknesses in terms of exposure and development limitations are most harmful when coupled with unrealistic targets without the administrative capabilities and available finances. Policy instruments can be used to address the European Union's regulatory impact, but they are legitimate only if they are fairly distributed and protect workers and vulnerable households (Islam, 2022).

International co-operation on domestic responsibility in differentiated obligations should further be scaled up to give Pakistan more development options; and the European Union should do the same by meeting its heightened capacities. By maintaining a focus on sustainable development as a comparative benchmark, climate risks can be lowered, development gains safeguarded, and dialogue between national and international institutions enhanced (Li et al., 2023). When measuring roles and contributions over time, and how well they are doing their jobs today, it is clear that there is a need to differentiate accountability without evading it. Progress in Pakistan's exposure and development bottlenecks can be gauged by reduced emissions, increased resilience, equity in access to resources, and public well-being. At the same time, coordination and collaboration among government levels, the executive, local authorities, communities, firms, and civil society are essential to responding effectively to the influence of European Union

legislation. Failure to act on domestic responsibilities within differentiated obligations at an early stage increases future costs, breeds social inequality, and undermines trust in climate governance (Chancel, 2022). Discussions of sustainable development as a comparative benchmark should be beyond simple targets and focus on implementation, financing, enforcement, and distributional issues. Building a fair partnership requires public protection, participation, responsibility, and resources. These changes can translate differentiated responsibility into security for vulnerable populations (Smiley et al., 2022).

Foundations of Climate Justice and International Accountability

Climate Justice and Sustainable Development

Climate justice is about a just distribution of the causes, burdens and benefits of climate change, and of decision-making power. It goes beyond sympathy for vulnerable countries (Abram et al., 2022). It questions the source of emissions, who benefited from carbon-intensive developments, who will be affected by the risks, who can finance protection measures, and who will control the institutions developing solutions. These questions focus on the vulnerability of Pakistan and the European Union, as well as within the jurisdictions, where vulnerabilities are determined by income, gender, employment, location, age, and political influence. Sustainable development is development that satisfies current needs without compromising the ecological and social bases available to future generations. Climate policy and development policy are therefore closely linked. Energy decisions affect industrial development, household well-being, air quality, employment, public budgets, trade, etc. (Jbaily et al., 2022).

Adaptation affects food security, water, housing, health, education, and infrastructure. It is not only possible to miss the mark on climate action, but it's also possible to be unfair! Rapid, high energy price rises could strain poor people, conservation could drive people away, and demand for transition minerals could create unsafe extraction. Sustainable development is achieving more reliable access to energy, alleviation of poverty, employment generation, better provision of public services, and

resilience of communities to climate shocks without relying on high-carbon infrastructure in the long term for Pakistan (Sovacool et al., 2022). For Europe, this implies decarbonizing a rich economy to support affected workers and regions, reduce consumption-based impacts, and help countries with less capacity. No one set of needs or resources exists, and so the same policy cannot be implemented in exactly the same way. Climate justice gives standards to judge development: emissions should decrease, the quality of essential services should be enhanced, the costs of transitioning should be progressive, and vulnerable groups should be involved. Sustainable development provides a practical framework for achieving justice that links concepts with planning, budgets and results. International cooperation for the distribution of climate burdens and benefits should help expand development options to Pakistan, forcing the European Union to step up to its new capabilities (Juhola et al., 2022). By continuing to focus on energy access and decarbonization, both climate risk and the stability of development gains can be minimized, along with building trust between national and international institutions. A just transition for workers and households helps to understand why the accountability of both parties needs to be differentiated, but not so as to avoid suitable accountability for either party (Berberian et al., 2022).

The development options for future generations should be assessed based on their emissions reduction, resilience, and equity of access to resources and their public welfare. Coordination between legislatures, executives, local authorities, communities, firms, and civil society is also important for an effective response to the distribution of climate burdens and benefits. A key test of the commitments is whether they have a measurable impact on rights and development opportunities (Garvey et al., 2022).

Principles of International Climate Accountability

The principle of international climate responsibility is that all states have some responsibility to tackle climate change, but they have different responsibilities based on their level of capability and what contribution they have made to climate change. Common but differentiated responsibilities

acknowledge that the problem is shared, but not the emissions history, financial capabilities, technology, or institutional power of Pakistan or the European Union (Banerjee & Schuitema, 2022). The pace and extent of mitigation, the availability of finance for mitigation and adaptation support should be based on differentiation. This is reinforced by the polluter pays principle, which levies prevention and repair costs on the polluter. On an international level, it provides scope for the higher contribution by the wealthier high-emitters and for a more stringent control of corporations whose emissions are produced and/or financed. The historical responsibility dimension is added by focusing on the current atmospheric danger, which is a result of emissions throughout the decades or centuries, a time when the European economies developed their infrastructure, wealth and technological capacity. There needs to be transparency to have a sense of responsibility (Cappelli et al., 2021). Effective national targets require baselines and timelines, sectoral plans, budgets, and progress reports. Financial commitments should differentiate between grants and loans, as well as determine if funds are available, new, additional, and if they are, whether they have been made available. Pakistan needs to share its resource allocation for climate change and whether projects are designed to safeguard vulnerable groups. The European Union has to prove that carbon-intensive production does not occur elsewhere, but mainly in the EU in order to achieve domestic reductions. Loss and damage issues involve those impacts that can't be prevented by mitigation or adaptation. Support should include non-economic harm such as health, culture, ecosystems, territory, and community cohesion, as well as destroyed assets (Tribaldos & Kortetmäki, 2022).

Remedy is a part of accountability. Diplomatic promises and commitments are given direction and teeth by Review processes, legislatures, courts, auditors, civil society, media and affected communities. The roles of different actors should be measured by the results achieved by the reduction of emissions, building of resilience, justice in access to resources and public well-being. Coordinating legislatures, executives, local governments, communities, companies and civil society is also

essential to an effective response to the polluter pays principle (Bennett et al., 2023). But if the reporting of emissions and financing is not transparent at the beginning, costs will be higher in the future, social inequality will be exacerbated and confidence in climate governance will be undermined. Debate on the question of accountability for unavoidable loss and damage needs to go beyond setting targets, to the implementation, financing, enforcement and distributional consequences. A detailed examination of common but differentiated responsibilities (CBDR) shows that climate leadership in the outside world is undermined when climate costs are shifted within the home country and/or the trading zone. Long term credibility consistent policy, availability of funding, independent measurement of outcomes (Mikulewicz et al., 2023). This distinction matters. The capacity of institutions and transparency of their work is a prerequisite for effective cooperation. But the progress must be durable and link international commitments with results at the national level.

Climate Vulnerability, Development, and Governance

Climate Risks and Environmental Inequality

Pakistan is vulnerable to the climate hazards that are all interconnected in mountains, river ecosystems, drylands, agricultural areas, cities, and coastal areas. For instance, Pakistan contributes less than 1% (roughly 0.9%) to global greenhouse gas emissions, yet it consistently ranks among the **top 10 most climate-vulnerable countries in the world** (Ministry of Climate Change and Environmental Coordination, 2025). River flow patterns may also change as glaciers melt, causing abrupt flooding in the north. Heavy rains and river floods lead to loss of life and livelihood; destruction of settlements, crops, roads, schools, and health facilities (Zimm et al., 2024). Affecting agriculture and livestock, droughts and rains are uncertain; extremely hot weather affects outdoor workers, demands higher electricity consumption, and leads to higher illness rates. Ecosystems are degraded; erosion and saline intrusion are issues in coastal communities, and risks associated with storms are present. Disaster occurs when exposure is carried out in a discriminatory manner. Safe housing and/or safe locations are often out of reach for poor households. Informal

settlements may not have a drainage system, access to clean water, cooling, secure access rights, and ready access for emergency services. Rural families rely on climate-sensitive agriculture, and have low savings and market power, as well as limited access to irrigation and insurance (Newell et al., 2021). Women may be limited in their ability to move around, have less access to land, have more unpaid care responsibilities, and not receive formal compensation. Families' displacement results in children being deprived of learning and nutrition. Environmental inequality is also an indicator of unequal investments in the public sector. Protected infrastructure and recovery assistance might be available earlier in wealthier areas and/or regions with political influence. Those who have no legal identity, bank accounts, jobs or property may be denied access to the provision of aid. People with disabilities and seniors might not get warnings or help to evacuate. These divisions are exacerbated when they are repeated, and result in poor families having to sell their assets, borrow, or have children leave school (Otto et al., 2023).

Risk reduction needs to be supported by physical infrastructure, social protection, inclusive warnings, safe shelters, public health, livelihood support, and participation of the communities. National averages do not provide information on the extent to which the most vulnerable are being protected. The discussion on exposure to floods and heat in the public sphere in Pakistan needs to be shifted from numbers of targets to issues of implementation, financing, enforcement, and implications of distribution (Andreucci et al., 2023). A careful study of unequal housing and service provision shows that leadership in the mission of climate change is undermined if there is a transfer of costs to other places in the world due to domestic or trade practices. Gendered and rural vulnerability can only be addressed through effective reforms, which will be fragile without communities having access to information, challenging exclusion, and being able to access effective remedies. The capacity of institutions and transparency of their work is a prerequisite for effective cooperation. But the progress must be durable and link international commitments with results at the national level (Turnhout, 2024).

Climate Change and Sustainable Development Challenges

Climate change can stall Pakistan's development in the agriculture, water, health, energy, education, employment, infrastructure, and public finance sectors. The agriculture sector continues to play a significant role in national livelihoods and food security, and when rainfall, heat, floods, pests, and water scarcity issues worsen, it becomes a national issue (Yasin, Munir, Shehzadi, & Saleem, 2026). Losses reduce the income of farmers, drive up prices for consumers, negatively impact exports, and drive up the cost of imported food (Redvers et al., 2023). Households, agricultural, industrial, and ecological uses, and production of electricity compete for water under conditions of water stress. Health impacts consist of heat stress, injuries, contaminated water, malnutrition, respiratory illness, and alteration of climate-sensitive disease patterns. Heat poses a risk to outdoor workers spending hours and money without work. During the cold season, when there is a surge in need for sanitation and clinics are already swamped with patients, floods wreak havoc on them (Avelino et al., 2024).

If buildings are destroyed or used as shelters, children may miss a great deal of school, resulting in learning losses that persist after physical reconstruction. The development dilemma is displayed in the energy policy. Energy insecurity poses a fiscal risk to Pakistan as the reliance on imported fuels is a big challenge to the country, while the need for electricity for domestic consumption, industrial, and public services is also in danger of not being available at an affordable price on a daily basis (Sultana, 2022b). Weak grids, financing costs, governance issues, and the lack of consistency in regulation are major factors that slow the pace of implementation of renewable energy and efficiency measures and limit reduction in emissions and import exposure. Transition policies also need to safeguard workers and communities that are dependent on the existing energy industries. The impact of disasters on public budgets is increased. A lack of resources for health, education, housing, and poverty reduction because of emergency relief and reconstruction. Borrowing is in the form of debt service and means fiscal space is lost in the future (Sultana, 2022a).

Keeping resilience as an integral part of public investment, land use, agriculture, social protection, and economic planning is thus a precondition for sustainable development, which cannot be a stand-alone environmental program. Action on food and water security can bring energy security, decent jobs, public health, and poverty alleviation together with climate protection in long-term solutions (Bainton et al., 2021). The issue of the interruption of public health and education brings into focus the need for historical responsibility, current capabilities, and vulnerability to harm in relation to climate responsibility. Comparing low-carbon energy development on the affordable front allows us to avoid seeing similarities and obscuring big differences in resources, institutions, and development needs. A just perspective on climate-resilient public investment can be guided by questions of whether policy burdens are just, implementation is believable, and whether the affected people can be provided with protective action. A key test of the commitments is whether they have a measurable impact on rights and development opportunities. This distinction matters (Rajamani et al., 2021).

Climate Governance and Accountability Gaps

Pakistan has climate policies, international commitments, disaster management organizations, environmental organizations, and legislation for national coordination. The main challenge is not necessarily to have no policy at all but to have a policy that is not consistently implemented. The division of responsibilities is at both federal, provincial, and local levels, and also climate risks span the administrative levels (Bhambra & Newell, 2023). This can result in overlapping recommendations, conflicting management, slow decision-making, and imbalanced capacity. There are other limitations, such as finance. The need for climate is up against debt service, security, energy subsidies, poverty reduction, health, education, and infrastructure priorities. Technical applications, safeguards, monitoring systems, and co-financing often needed by international funds are beyond the scope of the capacity of overstretched institutions. Projects that are created primarily to meet donor needs may lack community priorities and/or a

strengthening of permanent public capacity (Araos et al., 2021).

The challenges of accountability are: reduced access to information, poor data quality, poor implementation of land use and environmental regulations, short-term political thinking and low levels of local involvement. The projects announced may be missing in transparency, budget or selection criteria, maintenance plan, and independent evaluation. Important stakeholders can benefit from it, but no one outside of the formal structure or representation. Clarifications in institutional mandates, stable professional staffing, institutional integration of climate budgeting, information on reliable risk data, parliamentary and public oversight, and enhanced local government are necessary for improvement (Williges et al., 2022). Consulting does not take the place of needed influence; it comes after influence has already been achieved in the community. The commitments made by Pakistan for the country must also be tied to the timelines, targets, agencies, and measurable indicators for the sectors. Access to international support should be made easier, and the financing of the systems needed for transparent delivery should be eased. A lack of accountability in the presence of higher resources would be of no use, as would a higher level of accountability with fewer resources (Povitkina et al., 2021). A justice-focused approach to coordinated action between the Federal, Provincial and Local levels considers if policy is just, implementation is feasible, and affected individuals are able to access protection. Rules of transparent climate budgeting and data need to be clear in law, have sufficient budget, involve public participation, and be evaluated transparently. Poor engagement by communities in project identification is most harmful when there is no institutional capacity or available funds. Requires public protection, participation, responsibility and resources to build a fair partnership. Vulnerability reduction is the key to sustainable development; it is not about reproducing economic dependency (Boyd et al., 2021).

The European Union: Climate Leadership, Development, and Responsibility

The EU Climate Governance Framework

A multi-layered climate governance system has been built at the European level, with regional legislation and national implementation. It has an overall long-term objective of climate neutrality, medium-term emissions targets, carbon pricing, regulations on renewable energy, energy efficiency and energy consumption in the sectors, and planning obligations for member states. The European Parliament sets policy and the Council and European Commission help to develop the legislation (Wallimann-Helmer, 2023). Oversight by courts, national authorities and regulators, and civil society. Carbon pricing is a primary tool, but also applies to the electricity sector, industry, transport, buildings, land use, product standards, finance, and innovation. An emission trading system establishes a price signal for covered sectors and supportive regulations are developed to cover other sectors where pricing is not adequate. Infrastructure, research, regional adjustment, and industrial transformation are funded by public funds (Thomas & Benjamin, 2023).

National energy and climate plans are supposed to align the Union-level energy and climate goals with domestic action. This system has benefits over voluntary commitments only, as it puts them in legislation, requires regular reporting, and allows institutions to readjust the measures if they are not achieving sufficient progress. But there can be confusion of responsibility when things get complicated. There is varying implementation across member states based on the diversity of energy systems, incomes, industry and political support. It is also possible that relying on distant targets can mask slower near-term action (Huber & Murray, 2024). The framework needs to be assessed in terms of reductions in emissions, investments, enforcement and social outcomes, in practice. Low-income families could be negatively affected by the carbon price or efficiency regulations if the revenues are not used to pay for housing, transportation, and energy. European companies could be shielded from competition in an industrial policy without taking any measures to tackle the effects on developing country suppliers.

While legal motivation is important, there is a need for proper implementation of the law across sectors and borders for it to gain credibility. While policy tools address the legally enacted European climate targets, they are legitimate only if they are seen as being equitable and if workers and vulnerable households are protected. International coordination for the development of carbon prices and complementary regulation should further enhance Pakistan's development options and impose Pakistan's higher capabilities on the European Union. Strong political backing from the member states on non-uniform implementation can decrease the climate risk, help to safeguard the country's development achievements, and build trust between the national and international institutions (Ledger & Klöck, 2023). A key test of the commitments is whether they have a measurable impact on rights and development opportunities. Long-term credibility, consistent policy, availability of funding, independent measurement of outcomes. This distinction matters.

Sustainable Development and the Green Transition

The European Union takes the green transition on the one hand as an environmental transition, on the other as an economic transition. The transition to renewable electricity, to more energy-efficient buildings, cleaner transport, industrial innovation, circular production, and ecosystem protection can help to lower emissions and enhance air quality, energy security, health, and technology competitiveness (Morgan & Petrou, 2023). Investment can lead to jobs in construction, manufacturing, research, grid, public transport, and environmental restoration. The following benefits are not guaranteed. Coal, refining, heavy industry, or traditional vehicle manufacturing workers and areas could lose their jobs and local tax revenues. Low-income families may have problems with energy costs or the initial cost of home improvements and car replacement. Projects that do not consider issues of land, landscape and livelihood may not be welcomed by rural communities. Income support, retraining, investment in the affected regions, access to affordable public transport, social housing improvements and involvement of those affected by the transition are then essential to a just transition

(Anantharajah & Setyowati, 2022). Energy security is now intricately linked to climate politics. While it would help not to be exposed to geopolitical and fossil fuel price shocks, it would be difficult to change infrastructure quickly enough, as there is a need for grid, storage, permitting, materials, and acceptance. Foreign dependence on minerals and manufactured goods can only be a transposition of one vulnerability into another. Sustainable policy needs to diversify the supply, while taking into consideration labour rights, environmental and human rights overseas. The internal transition of the European Union has international impact. Investment and market access in developing countries are impacted by subsidies, standards and border measures. Policy measures to avert carbon leakage can help decarbonize, but can also harm exporters who lack access to affordable technology and/or finance (Brousseau et al., 2024).

The Union must match regulatory demands with support for its less well-off partners to enable them to meet the requirements and diversify. When considered side-by-side, the social justice part of a transition for workers and regions demonstrates why the need for accountability should be differentiated without abdicating on either side the responsibilities for a just transition. The energy security of decarbonization should be evaluated by a decrease in emissions, an increase in resilience, greater equity in access to energy resources, and an increase in public welfare (Jones et al., 2024). The necessary coordination between legislatures, executives, local authorities, communities, firms and civil society is also vital to an effective response to responsible critical mineral supply chains. A key test of the commitments is whether they have a measurable impact on rights and development opportunities. Long-term credibility, consistent policy, availability of funding, independent measurement of outcomes. This distinction matters.

International Responsibility and Accountability

It is a fact that the EU has a history of emissions, has a lot of wealth, market size, technology, and has a lot of influence as a diplomat on the international climate. It claims to be a climate leader by making mitigation commitments, through development cooperation, climate finance, technical assistance

and support for multilateral agreements. They are very important, but a measure of responsibility and capability should be used to measure leadership, not just against weaker international performance. Climate finance needs to be predictable, additional and fit for the need of vulnerable countries (Yumagulova et al., 2023). Adaptation and loss and damage is an area in which loans are not an appropriate way of financing projects, even if they have financial returns. Grants are required when there are benefits that are public, local or hard to monetize. If there is limited administrative capacity in a country, its access procedure should not be excluded. There should be communication with the local communities in finance, but not only in large consultancy-driven projects. Technology cooperation involves knowledge sharing, technology transfer, maintenance, research collaboration, fair technology licensing and support for the local production. The mere sale of European equipment can increase the dependence on imports. Another test of accountability is via trade policies. Border measures could also incentivize cleaner production but can disadvantage those exporting who may not have the same level of finance and infrastructure as are found in Europe. Revenue and technical support are vital for supporting affected developing countries to decarbonize (Gonçalves et al., 2024). Consumption based emissions and environmental impacts of imports will also need to be considered by the Union. If carbon-intensive production, the damage done to the land of mining, unsafe working conditions, and deforestation are exported, the credibility of domestic progress is compromised.

In order to be consistent with international accountability, there needs to be consistency between the different policy fields of climate diplomacy, finance, trade, agriculture, energy, corporate regulation, and consumption. It is not for Pakistan to be considered as a recipient of European aid, but rather as a partner on an agency basis. If we fail to tackle adequacy and quality of climate finance in Europe early on, the costs that it entails will be higher in the future, social inequalities will be exacerbated, and trust in climate governance will be reduced (Wang & Lo, 2021). The discussion of technology cooperation in general must go beyond the 'headline numbers' from equipment sales and

involve issues such as implementation, funding, enforcement and distributional impacts. A detailed examination of the fairness of the carbon-related trade measures shows that climate leadership is undermined when costs are shifted to other places, as a result of domestic or trade measures. The comparison reveals inequity of power. The capacity of institutions and transparency of their work is a prerequisite for effective cooperation. Requires public protection, participation, responsibility, and resources to build a fair partnership (Stark et al., 2023).

Pakistan and the European Union: A Comparative Assessment

In this regard, Pakistan and the EU have some historical differences. The industrialization of Europe has been based on fossil fuels for a much longer time and, in this time, has created wealth, infrastructure, and technological capability as well as accumulated emissions. While it is important not to ignore Pakistan's present emissions, especially in the context of its increasing population and energy consumption, the emissions from Pakistan are structurally different from those of historical warming, and per capita emissions are different (Diana et al., 2023). Justice thus means increased and accelerated mitigation in the EU and a gradual shift towards cleaner development in Pakistan, expanding essential services. They don't have the same level of exposure as well. Pakistan's vulnerability is vast with regard to Floods, Heat, Drought, Water, Agriculture, Glaciers, urbanization, and the coast. These risks are compounded by poverty, informal employment, poor housing, lack of insurance, and budget limitations (Savaresi et al., 2024).

Generally, the European Union has better infrastructure, health systems, and emergency capacity, insurance, and public finance, but is vulnerable to heat waves, fires, flooding, drought, disruption of agriculture, and coastal risk. Both jurisdictions are vulnerable, but not equally resilient to loss or able to absorb and recover from it. Another significant difference is the financial and technological ability. European governments and institutions have greater access to public funds, can manage the financial markets, fund research and

subsidize industry, and can borrow on better terms. Pakistan has to pay higher costs of financing, faces foreign exchange problems, and has to deal with a greater debt burden and reliance on imported technologies. A similar climate target would thus require a far greater sacrifice from Pakistan and would be a rival to poverty alleviation and provision of basic services (deSouza et al., 2023). The EU has a stronger institutional design and a more legally integrated institutional design. There are multiple layers of accountability at regional, national, carbon pricing, regulatory, reporting, court, and legislative levels. There are important policies and institutions in Pakistan, but there is a lack of effective implementation at various levels—federal, provincial, and local. Data and enforcement, staffing, finance, and maintenance are inconsistent. But the complexity of Europe can also generate accountability problems, and, at times, member states can be opposed or unwilling to take common measures. Political back-and-forth and unequal results do not go away because of more robust formal structures. The priorities for sustainable development are not mutually exclusive, but start with different sets of circumstances. Pakistan requires a sustainable source of energy, job opportunities, food security, robust infrastructure, poverty alleviation, health and education (Tessum et al., 2021). Its transformation should not create a lock-in on these goals and objectives in costly and polluting systems.

The European Union (EU) needs to reduce the carbon footprint of existing high-consumption economies while ensuring the protection of labor, energy cost management, energy industry modernization, and minimizing external environmental effects. Both require a just transition, but in the case of Pakistan, there is a growing focus on building new capabilities, and in the case of Europe, a focus on reconfiguring current capabilities. There needs to be transparency and participation in both of these settings (Goforth & Nock, 2022). There is a need to do better in climate budgeting, procurement, land use enforcement, project evaluation, and incorporating vulnerable groups in Pakistan. European institutions need to make complex decision-making accessible, reduce industry lobbying of targets, and ensure non-discriminatory

distribution of costs of climate change among low-income households. Distributional consequences of policy (in addition to aggregate emissions) should be made public by both jurisdictions. International influences are very unevenly distributed. The European Union sets the trade standards and investment laws, climate policies, technology markets and the financial landscape.

Pakistan has less influence on the formation of rules, but has considerable influence through the multilateral process, to which it belongs, and in which it can advocate on behalf of the vulnerable developing countries. The impact of European measures may, therefore, extend even to Pakistan's exports and development possibilities for the country, though Pakistan might not have had much control over the design of such measures. European policy and its consequences have to be held to account, too (Picciano et al., 2023). The comparison shows that the same duty is not the same duty; and that, differentiated responsibility does not imply that there should be no responsibility. It is high time for Pakistan to deploy the available local as well as foreign resources in an open and accountable manner, enhancing institutional strength, protection, and minimizing any unnecessary 'high carbon lock in'. The European Union should cut its emissions according to its capacity, finance and technological capacity, take into account losses and damages and avoid shifting costs to trade or consumption.

There should be a reciprocal, but unequal level of commitment toward cooperation. Pakistan can share implementation plans, bolster safeguards, and illustrate the protection of funds to the communities. Multyear financial support in the form of grants, technical cooperation, access to fair markets, and support for resilient infrastructure is offered by the European Union. Independent monitoring can be used to determine if both parties are doing their jobs. Fair comparison does not obliterate differences; it is based on differences to develop credible obligations and a partnership to further sustainable development (Zahnow et al., 2025). Differentiated mitigation and historical emissions shall continue to be fragile if communities don't have access to information, an ability to challenge exclusion and seek adequate remedies. Long-term climate

protection/evaluation work may link energy security, decent jobs, public health and poverty alleviation with climate protection, if exposure and recovery capacity is unequal.

The question of "how do financial and technological resources differ" highlights that the responsibility to climate has to do with historical responsibility, current capacity and susceptibility to harm. Comparative analysis of climate institutions (CCI) avoids a formal similarity being used to mask important differences in resources, institutions and development needs. A justice-focused perspective on other priorities of sustainable development asks if policy burdens are equitable, policy implementation is believable, and can people affected by it be protected? Concrete changes towards transparency and involvement in both jurisdictions must include clear legal responsibilities, sufficient funding, stakeholder involvement, and transparent evaluation of outcomes (Guedes et al., 2024). When the EU's increased international influence is paired with bold promises without administrative resources or readily available finances, gaps in effectiveness and efficiency become most serious. While the policy instruments can solve the problem of reciprocal but unequal climate commitments, they need to be legitimate, with a focus on distributional fairness, and protection for workers and vulnerable households. A key test of the commitments is whether they have a measurable impact on rights and development opportunities.

Building an Equitable and Accountable Climate Partnership

Climate justice and measurable development outcomes should be linked in a program that is jointly agreed upon, as a starting point for an equitable partnership. Cooperation can not be in the form of separate projects which are chosen primarily for political publicity. Priorities need to be identified between Pakistan and the EU in the areas of resilient infrastructure, renewable energy, water, agriculture, health, disaster preparedness, industrial development and social protection. A timeline, responsible institutions, public budget, safeguards, and indicators of who benefits are required for each priority. Finance should be certain and slanted towards grants for adaptation, for essential public

services, and for loss and damage (Saleem et al., 2026). Loans could be considered a viable way of funding revenue-generating clean energy or infrastructure projects where there is the capacity to repay the loan, but should not be the primary source of funding for vulnerable communities. Multiple-year agreements would enable Pakistan to plan for longer projects.

Procedures and technical assistance have to be expedited, without compromising transparency. All major promises made should be identified, along with how much, how it will be paid, what it will be used for, whom it will go to, and whether it's being acted on, in a public release. Cooperation in technology should be aimed at building the capability of the Pakistanis (Saleem et al., 2025). Partnerships can be used to help with grid management, renewable integration, efficient industry, cooling, climate data, water systems, resilient agriculture, storage, and early warning. The value of equipment transfers is less than that of training, university collaboration, research, maintenance and repair, local manufacturing and fair licensing. Plans for skills, spare parts, and long-term operation should be a part of the procurement process. The trade and industrial cooperation should be explicitly supported with safeguards of fairness. For Pakistani exporters, especially smaller companies, who are not able to invest in cleaner production, European carbon and product standards might come into the picture (Khalid et al., 2026).

The European Union should give transitional support and offer easily available technical guidance and investment to decarbonize industries, not to simply exclude them from markets. Pakistan needs to enhance environmental law enforcement, worker protection, energy minimization and available pollution monitoring. Co-operative efforts can enable the development of clean value chains without job loss or loss of export potential. Local involvement be used in the design of resilient infrastructure (Brousseau et al., 2024). Communities have an influence over project sites, priorities, land arrangements, compensation and monitoring. Accessible representation for women, youth, farmers, informal workers, persons with disabilities and displaced people. Independent grievance procedures should offer redress where projects lead to exclusion

and/or damage. There is a need for an accountability review process that is carried out regularly with public participation. Information on annual progress, financing, impediments to implementation and distributional outcomes could be published by a joint body. Performance should be considered by the Parliamentary committees and auditors, researchers, civil society and community representatives. The review should not confuse failure due to lack of European support with failure due to poor coordination or corruption in Pakistan, or poor implementation in Pakistan. It should also cover disaster arrangements that are debt sensitive, access to international loss and damage financing and enhanced early warning and contingency mechanisms. Ultimately, it is not about institutional activity, but about saving lives, safeguarding livelihoods, ensuring services reach people, lowering emissions, and increasing development choice. Cooperation is just when there is visible and independently verifiable protection as a result of differentiated responsibility (Jones et al., 2024). By comparing a joint program with a program that is tied to the outcomes of development, it becomes easier to focus on the similarities rather than the differences and to find the critical differences. By looking at a joint program comparatively, formal similarity does not mask major differences in resource, institutional and development needs.

A justice-focused approach to predictable grants and transparent financing asks whether policy impositions are just, implementation is feasible, and whether those impacted by the policy can be protected. A clear set of legal responsibilities, adequate funding, public engagement and visibility of outcomes is needed to establish technology partnerships that develop local capacity. Ambiguous and high expectations for cleaner trade and industry have the greatest negative impact when not accompanied by administrative capacity and access to finance (Thomas & Benjamin, 2023). While policy instruments can help to increase community participation and establish grievance processes, they must be founded in a sense of fairness with regard to distribution and workers' and vulnerable households' protection. There should be greater cooperation on the annual review of reciprocal commitments by the independent experts with a view to expanding

Pakistan's development options and its expectation that the EU will demonstrate its greater capabilities. The comparison reveals inequity of power. Therefore, to be held accountable, there needs to be something verifiable that is implemented. In order to get durable progress, there needs to be a link between promises at the international level and outcomes in the country. There is a need for responsibility, resources, participation, measurable public protection for fair partnership (Boyd et al., 2021).

Conclusion

Pakistan versus the European Union shows that there is a need to be accountable for climate change, but equality and uniformity are not necessary. While the climate exposure of Pakistan is high, the development pressures are high, fiscal space is limited, institutional weaknesses are high, and historical responsibility is comparatively low. The EU has more wealth, technology, regulation, and responsibility due to long industrial development. Equal responsibilities for these unequal jobs would only be reinventing the injustice of climate change. No excuses for either party for differentiation. Coordinating, budgeting, transparency, enforcement, local participation, and protection for vulnerable communities are needed to build Pakistan's coordination. It needs to link international agreements with sectoral plans and not rely excessively on high-carbon infrastructure. The European Union needs to address greater ambition in its own emissions reductions, make grants available and accessible for financing loss and damage, fairly share technology, and plan to address the externalities of trade, consumption, and supply chains. The common goal is sustainable development. Cooperation should contribute to enhanced energy access, job creation, health and education, food and water security, resilient infrastructure and long-term economic opportunity, whilst cutting emissions. A credible partnership needs to be multi-year in nature, have clear accountability, publicly report, include community protection measures, and have independent oversight. In both promises on Europe and implementation in Pakistan, accountability should be ensured. The relationship is only equitable when

the responsibility extends to the international level, and Pakistan's capacity to enhance its ability to shield its population remains unaffected by this expansion of responsibility; otherwise, it creates new debt and dependency. Finally, the extent to which climate justice is achieved will be assessed through institutional actions and outcomes, namely by the extent to which they decrease risk inequity and allow for dignified development opportunities for current and future generations. These changes can be a way of achieving differentiated responsibility in practical terms for vulnerable communities.

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